Claims

Having thus described our invention, what is claimed is:

- A mobile agent management apparatus comprising: 1.
 - a plurality of agent servers; and
- a registration server for maintaining location information of mobile agents,

wherein each of said plurality of agent servers comprises: means for maintaining history of movement of each of said mobile agents; and

10 request means for periodically generating requests for updating location information of each of said agents to renew location information at said registration server.

- The apparatus of Claim 1 wherein each of said agent 2. servers further comprises a counter for accumulating a count of 15 the number of movements of corresponding mobile agents.
 - The appartus of Claim 2 wherein each of said agent 3. servers further comprises comparator means for comparing the count in said counter with a predetermined threshold.
- 4. The apparatus οf Claim 1 wherein the request 20 generator of each of said agent servers generates a request to

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m said registration server for updating location information when the an accumulated number of movements of a corresponding mobile agent exceeds the predetermined threshold.

- 5. The apparatus of Claim 4 wherein said registration server comprises at least one register for maintaining accumulated number of movements and locations of each of said mobile agents in an associated manner and renews said location information of each of said mobile agents only upon receipt of requests for updating location information associated with a complete accumulated number of movement.
 - 6. A method for managing locations of mobile agents by using a plurality of agent servers and a registration server for maintaining locations of mobile agents comprising the steps of:

on each of said agent servers;

maintaining history of movement of each of said mobile agents; and

periodically generating requests for updating and deleting registries; and

at said registration server, renewing location information of each of said mobile agents kept by said registration server with said requests for updating and deleting.

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- 7. The method of Claim 7 wherein each of said agent servers accumulates a count of number of movements of corresponding mobile agents.
- 8. The method of Claim 7 further comprising comparing 5said accumulated number of movements to a threshold number of movements.
- 9. The method of Claim 8 wherein said generating is done when said accumulated number of movements exceeds said threshold number of movements.

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